SOUTH CAROLINA

Beach Nourishment on the Atlantic and Gulf Coasts of the U.S.—2002, 2003

This project helps state and local governments along the Atlantic and Gulf coasts of the U.S. make informed decisions about the nourishment of beaches by consolidating the best scientific and technical information and tools for evaluating and understanding beach nourishment into one source. This resource is a user-friendly Web site that includes relevant information and tools from the fields of coastal geology, engineering, economics, law and policy, and the biological sciences.

***Characterization of the Ashepoo-Combahee-Edisto (ACE) Basin, South Carolina*—1997 to 2000**

www.csc.noaa.gov/lcr/text/aceweb.html

To assist the state and local governments that manage environmental resources within the ACE Basin, this project produced a flexible, user-friendly source of information, data, and management tools. The resulting CD-ROM integrates diverse information about the area's physical characteristics, ecology, history, socioeconomics, and management. This project was led by the South Carolina Department of Natural Resources and was conducted in partnership with the Center.

Charleston Metro Chamber of Commerce Business Development Group—1999

A Center program, the Center for Technological Innovation (CTI), merged its operations with the Business Development Group within the Charleston Metro Chamber of Commerce. CTI, a natural fit for the Chamber, was an "incubator" for high-tech business. CTI provided many services to start-up companies, including industry analysis, market assessment, start-up expertise, and capital resource networking.

Coastal Land-Use Techniques Training Program—2000

Funding from this project was utilized to develop and implement a training program for local policy makers. Topics include coastal issues and the tools and techniques available to address these issues, plus the legal aspects of using local government power. This project was funded with a special project grant from the Center.

Coastal Management Fellowship—1997 to 1999

www.csc.noaa.gov/cms/1997Fellows.html

A Coastal Management Fellow worked with the South Carolina Office of Ocean and Coastal Resource Management to refine its existing post-storm recovery plan using a geographic information system (GIS) database. The database will expedite the decision-making and public notification process regarding the condition of beachfront structures after a major storm.

Coastal Management Fellowship—1999 to 2001

www.csc.noaa.gov/cms/99_fellows.html

A Coastal Management Fellow worked with the South Carolina Office of Ocean and Coastal Resource Management to assess the technical capabilities and information needs of local governments within the coastal zone. The fellow established an information distribution mechanism to effectively serve the needs of local governments by providing recommendations and findings from agency-generated research. The fellow also developed a planning information management system to aid staff in understanding and using information about new and innovative coastal research, and developed a procedure and mechanism for integrating information into the agency's policy development and permit review processes.

Coastal Management Fellowship—2001 to 2003

www.csc.noaa.gov/cms/fellows/01_fellows.html

A Coastal Management Fellow is working with the South Carolina Department of Health and Environmental Control, Office of Coastal Resource Management, on a project entitled "Storm water Management System Inspection Program." The project includes assessment of current storm water management procedures, legal analysis of maintenance and inspection requirements, baseline field inspections of systems, and fiscal analysis of inspection programs.

Coastal Ocean Habitat Project—1996
www.csc.noaa.gov/products/gulfmex/startup.htm
The Coastal Ocean Habitat Project generated Center data products that utilized satellite observations of U.S. coastal waters. A CD-ROM of retrospective satellite sea-surface temperature images for the southeastern U.S. was produced in 1996.

Coastal Technology Services—2001
Coastal Technology Services establishes coalitions of the Center and government agencies, academic institutions, and private and nonprofit organizations to develop and test prototype decision-making tools and information products for coastal management, and to demonstrate and verify existing and lab-proven coastal and marine technologies. Full-scale pilot projects involve design and development of a prototype, field application and evaluation with end users, final product development, and training.

CZMA Bibliographies
www.csc.noaa.gov/CZIC/
The Center's library has cataloged NOAA's Coastal Zone Information Center collection, produced by state coastal management programs under the Coastal Zone Management Act (CZMA). This collection contains documents that span a number of coastal topics and includes brochures, management plans, and legislative information. A bibliography of this information for the State of South Carolina is available.

Development Costs and Benefits of Coastal Growth Patterns—2002, 2003
The goal of this project is to demonstrate to the Growth Options Partnering Committee, as well as to local governments and the development and real estate communities, that developing coastal lands in an efficient, responsible manner will profit the developer equally, if not more, than if the same lands were developed in an indiscriminant manner. The aim of the project is to perform a growth costs study using spatial data and geographic information system (GIS) technology and then report the findings to the committee. This project was funded with a special project grant from the Center.

***Digital Shoreline of South Carolina* CD-ROM—2000**
The *Digital Shoreline of South Carolina* CD-ROM delivers the most current and accurate depiction of South Carolina's shoreline in various formats for use in geographic information system (GIS) software packages. Coastal resource managers may use these data to better understand the shoreline of South Carolina. The source data range from 1:10,000 to 1:20,000, with the large scale being useful for viewing detailed information. The shoreline maps used as the source of the digital data were created from tide-controlled photography, thereby giving users a static glimpse of conditions at mean high tide throughout the state. This project was a joint effort between the Center and the National Geodetic Survey.

Educating the Public through their Children—2001 to 2003
This project fosters citizen support for recommendations of the Clean Water Task Force and Beaufort County's Special Area Management Plan (SAMP) by educating children who, in turn, will educate their parents about the protection of their water resources. Specifically, the project informs students of the progress, findings, and recommendations of SAMP and helps them conduct their own studies. Residents from local retirement communities volunteer to assist students with water measurements and monitor biological projects.

Estuarine Habitat Project—1996 to 2001
www.csc.noaa.gov/crs/ehab/
The Estuarine Habitat project investigated remote sensing and modeling approaches for studying oceanic and terrestrial processes. This project focused on building new, useful methodologies and applications to aid coastal managers in assessing estuarine habitat quality.

***Lessons Learned Regarding the Use of Spatial Data and GIS during Hurricane Floyd*—2001**
www.csc.noaa.gov/hfloyd/
During and after Hurricane Floyd, the NOAA Coastal Services Center worked with local, state, and federal coastal resource managers and emergency preparedness officials to document spatial data and information needs and uses. The resulting document is a best practices manual filled with information that can be of use to all coastal communities.

Ocean Color Applications Project—1996 to 2000
Through this project, processing and classification techniques were developed to evaluate coastal water quality and biological and geologic variables based on remote sensing data from satellite or aircraft. Data on the bio-optical characteristics of diverse U.S. coastal waters were collected. These data are used to validate satellite measurements used for ocean color data products.

Ocean Planning Information System (OPIS)—1997 to 2003
www.csc.noaa.gov/opis/
OPIS is the first system to provide the coastal management community in the southeastern U.S. with access to regional georeferenced spatial data and legal information. Major features of the OPIS Web site include an interactive mapping application, marine and coastal spatial data, data and metadata download tools, Federal Geographic Data Committee (FGDC)-compliant metadata, and legislative summary pages, all designed to support regional ocean management. In 2001, OPIS received a Hammer Award, a vice-presidential acknowledgment of projects and people that help government operate more efficiently and effectively.

Oyster Resources Mapping Pilot Study—2002
The South Carolina Department of Natural Resources, the Town of Hilton Head Island, and the Center initiated a pilot study to evaluate the uses of analog and digital imagery for detecting and mapping intertidal oysters.

Protected Areas GIS (PAGIS)
www.csc.noaa.gov/pagis/
The PAGIS project brought compatible geographic information systems (GIS), geographic data management, and Internet capabilities to each of the nation's 25 Estuarine Research Reserves and 13 Marine Sanctuaries. Through PAGIS, the reserves and sanctuaries also developed advanced data sets, underwent extensive training, and found innovative ways to make the most effective use of their new data and technological capabilities.

Shoreline Data Rescue—1997 to 2001
www.csc.noaa.gov/products/shorelines/
GIS-compatible shoreline data sets that include high-resolution contemporary and historic shorelines are available from the Center's Web site. The source of the historic shoreline data is NOAA t-sheet charts dating from the 1800s. This information is most frequently used to measure shoreline change.

South Carolina Land Cover and Change CD-ROM—1999
www.csc.noaa.gov/products/sccoasts/index.htm
South Carolina's Coast: A Remote Sensing Perspective is a two-volume CD-ROM set that demonstrates the utility of information acquired by satellite and airborne remote sensing systems for coastal South Carolina. Coastal resource managers may use this information to detect land-use trends, document shoreline dynamics, and educate the public. The CD-ROMs also contain geographic information system (GIS) tutorials explaining how to access and manipulate the data, examples on how the data can be used to address coastal resource issues, and tools to aid in the data analysis.

South Carolina Land Cover and Change Data—1998
www.csc.noaa.gov/crs/lca/s_car.html

This project mapped terrestrial land cover in coastal watershed environments and identified changes in these areas that occurred between 1990 and 1995. The project relied on satellite multispectral imagery as the primary information source. These data were used to distinguish major land cover classes, and previous images were studied to locate areas that changed over time. For this project, the data were acquired according to the Center's Coastal Change Analysis Program (C-CAP) methods.

South Carolina Oyster Restoration and Enhancement Program—2001 to 2003
www.csc.noaa.gov/scoysters/
The South Carolina Oyster Restoration and Enhancement (SCORE) program organizes volunteers and students to restore and enhance oyster habitats, establishes and promotes oyster shell recycling by the community, and fosters education by using constructed reefs as living classrooms. The SCORE Web site provides project information and includes interactive on-line tools for recording and analyzing monitoring data from the restoration sites. This project is part of NOAA's community-based restoration program, led by NOAA Fisheries.

Southeast Coast and Ocean Margin Program (SEACOM)—2002, 2003
The Center is leading an effort to enhance understanding of the significant natural resources in the South Atlantic Bight, a region extending from Cape Hatteras, North Carolina, to Cape Canaveral, Florida, out to the edge of the continental margin. The program is investigating significant natural resource areas, compiling this information into a spatial data framework, and working to inform and educate the public about the importance of discovery and management of these resources. The long-term goal is to provide an information foundation that allows managers to maintain economic vitality in the region while sustaining natural resources for future generations.

Spatial Wetland Assessment for Management and Planning (SWAMP)—2000, 2001
www.csc.noaa.gov/lcr/text/swamp.html
This GIS-based model helps coastal resource managers prioritize wetland habitats within a watershed. This ability also is helpful when addressing wetland restoration issues. SWAMP was originally developed for the Ashepoo-Combahee-Edisto (ACE) River Basin, South Carolina, but the general approach is transferable to other geographies.

Topographic Change Mapping—1996, 1997, 2000
www.csc.noaa.gov/lidar/
High-resolution Light Detection and Ranging (LIDAR) measurements of coastal beach topography were made during 1996, 1997, and 2000. These measurements can be used for beach change studies and are available to the public.